

UMALDY T. WATERFALL (1910-1971)

U. T. Waterfall was born in Frederick, Oklahoma on August 13, 1910 and died in Stillwater, Oklahoma on October 27, 1971. He married La Clida Cotter, July 24, 1935 at Fairfield, Oklahoma. He is survived by his wife and three children. Dr. Waterfall received his public school education at Albion, Oklahoma where he graduated from high school in 1931. He attended Arkansas Tech at Russelville, Arkansas for two years and received a B.S. from Oklahoma A & M (now Oklahoma State University) in Stillwater in 1935. He studied botany at the University of Oklahoma, Norman, and received his M.S. in 1942 and Ph.D. in 1956. His doctoral dissertation was a monographic treatment of the genus *Physalis* (Solanaceae) from which numerous papers have appeared in print.

U. T. Waterfall held memberships in several professional organizations including: Southwestern Association of Naturalists (served as president in 1965), International Society of Plant Taxonomists, American Society of Plant Taxonomists, New England Botanical Club, Oklahoma Academy of Sciences (served as section editor until his death), Phi Kappa Phi, and Sigma Xi. In addition, he is listed in "Who's Who in the South and Southwest", "Leaders in American Science", and "World Who's Who in Science."

Dr. Waterfall began his teaching career in 1934 at Helena High School, moving to Central High School in Oklahoma City in 1936. His first five years at Central High School were spent teaching music. However, after receiving his M.S. in 1942, he changed to teaching science. In 1944, he left the teaching field for two years and worked as a range ecologist with the Soil Conservation Service. In the fall of 1946 he accepted an instructorship to teach botany at the University of Oklahoma. He joined the faculty at Oklahoma State University in 1949 where he remained until his death. During his earlier years at OSU, he commuted to the University at Norman while working toward his Ph.D. Besides his regular duties as classroom teacher

and curator, Dr. Waterfall served on graduate committees of numerous students from botany and biological sciences to zoology, wildlife, agronomy and education. Additionally, he supervised the research of several masters degree candidates as well as six doctoral candidates. I was the last student to receive the Ph.D. under the direction of U. T. Waterfall, and consider myself fortunate to have been influenced by his knowledge and experience.

U. T. Waterfall's first publication was the result of numerous collecting trips to various parts of Oklahoma prior to 1939. Study of the state flora continued until his death, resulting in over 30 papers. Most of these appeared in "Rhodora" and "The Proceedings of the Oklahoma Academy of Science", others in "Sida", "Field and Lab" and "Southwestern Naturalist". Some of the more recent papers have been published under the title "Studies in the Composition and Distribution of the Oklahoma Flora". In 1952, "A Catalogue of the Flora of Oklahoma" was prepared by Dr. Waterfall and published by the Oklahoma Research Foundation. It listed 2542 taxa of specific or infraspecific status. Immediately following this work, he began his long study of all the vascular plants of the state. Parts of this study were finished and made available to his plant taxonomy classes in 1953, 1955, 1957, 1958, and 1959. These early works comprised his 1st edition, "Keys to the Flora of Oklahoma." The Keys . . ." has been revised periodically and is now in the 4th edition.

In accordance with an original plan, Dr. Waterfall was, for over twenty years, expanding the "Keys . . ." into a flora of the state. He died before this work was finished. Because of the nature of the work and the difficulty of typing the manuscript he typed over 700 pages of this later work himself. It is the desire of all who knew him that this work will not go unfinished.

In 1965 Dr. Waterfall received a grant awarded by the National Science Foundation to study collections of *Physalis* from Mexico, Central America and the West Indies which are housed in the great European herbaria. This

study was published in "Rhodora" in 1967. Because of this and earlier treatments of *Physalis*, Waterfall is widely acclaimed as the foremost authority on this difficult genus.

In addition to his European travels, Dr. Waterfall made several extended collecting trips in the United States and Mexico. His first collecting trip outside Oklahoma was to the various national forests of Colorado, Wyoming and Utah, but he did little with these collections because his interests turned to the Mexican flora and the flora of the desert Southwest. During the early years of World War II, he spent three summers studying poisonous plants along the Texas-Mexico border for Harvard University. Other valuable collections from "Southwestern Texas" are in the OSU Herbarium as well as other large herbaria in the United States.

Dr. Waterfall made four trips into Mexico. In a letter from his wife (November 26, 1972), she stated: "I think we must have traveled every road and trail north of Mexico City — as well as many places where we made our own trails!" A fifth trip was started in 1967 but had to be terminated at Laredo, Texas due to his health. From these trips, Dr. Waterfall collected some 5,000 sheets which have been distributed to various United States herbaria. The originals are in a separate "Mexican Herbarium" at OSU. Several new species and one new genus have been described by Dr. Waterfall as a result of these four collecting trips into Mexico.

During the last ten years of his life, his major problem was his health. During that period he had 5 major operations, 2 heart attacks, and several bouts with serious kidney infections. After an extended illness, he died on October 27, 1971 in the Stillwater Municipal Hospital.

In addition to his study of Oklahoma plants, some of his more noteworthy works include:

Waterfall, U. T., 1951. The Genus *Callirhoe* (Malvaceae) in Texas. *Field and Lab.* 19 (3) : 107-119.

———. 1958. A Taxonomic Study of the Genus *Phy-*

salis in North America North of Mexico. *Rhodora* 60: 107-114; 128-142; 152-173.

———. 1959. *Separotheca*, A new Genus (Commelinaceae) from Mexico. *Rhodora* 61 (725): 136-139.

Waterfall, U. T., and Mahler, W. F., 1964. *Baccharis* (Compositae) in Oklahoma, Texas and New Mexico. *Southwestern Naturalist* 9 (3): 189-202.

Waterfall, U. T., 1967. *Physalis* in Mexico, Central America and the West Indies. *Rhodora* 69: 82-120; 203-239; 319-329.

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THE ENVIRONMENT OF *SCHISTOSTEGA PENNATI*
(HEDW.) HOOK. & TAYL.:
NEW VERMONT STATIONS

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Schistostega pennati is the sole member of the moss family Schistostegaceae. It has attracted attention over the years primarily because of its characteristic of reflecting light back out of the crevices it grows in, with a chatoyant green-gold glow. Every six or eight years someone reports a new station, ranging in size from pea-sized patches to the magnificent expanse of several yards under the barn at Oldfields, in Groton, New Hampshire (Thomson, 1956). In most of the literature it will be found under *S. osmundacea* (Dicks.) Mohr. Most often it is discovered as a glowing mass of protonema on damp soil or rock in some dark crevice. Occasionally fertile and sterile fronds

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